Department of Toxic Substances Control

Edwin F. Lowry, Director
400 P Street, 4th Floor, P.O. Box 806
Sacramento, California 95812-0806

Winston H. Hickox
Secretary for
Environmental
Protection

Gray Davis
Governor

June 27, 2000

162

Mr. S. Mario Stavale
Boeing Realty Corporation
4060 Lakewood Blvd. 6th Floor
Long Beach, CA 90808

BOEING C-6 FACILITY, PARCEL D, LOS ANGELES, CALIFORNIA

Dear Mr. Stavale,

The Department of Toxic Substances Control (DTSC) has completed the review of the Parcel D Post Remediation Risk Assessment Report (February, 2000) prepared by Integrated Environmental Services, Inc. Attached are the comments by Dr. Yugal Luthra of the Human and Ecological Risk Division of the Department of Toxic Substances Control. The report is acceptable to the Department as submitted, and the Department agrees with the conclusion of the report that the residual contamination does not present a significant health risk.

The report indicated that the estimated background concentration for arsenic used for the soil removal action was 14 mg/kg. While this background concentration has been used previously at the site, more recent background information from sites in this area, as well as data collected from unimpacted areas on the Boeing C-6 Facility, indicate that background arsenic levels are considerably less than 14 mg/kg. We strongly recommend that the background estimates for arsenic be reconsidered for any future parcels.

If you have any questions, please contact me at (916) 327-2495 or by email at doudiz@dtsc.ca.gov.

Sincerely,

Deborah Oudiz, Ph.D.
Senior Toxicologist
Southern California Unit
Human and Ecological Risk Division

Enclosure

cc: Richard Braun, Ph.D.
Integrated Environmental Services, Inc.
3990 Westerly Place, Suite 210
Newport Beach, CA 92660

Mr. Augustine Anijielo
Regional Water Quality Control Board-
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, California 91754-7500

Michael J. Sullivan, Ph.D.
Safety, Health and Environmental Affairs
Rocketdyne Propulsion and Power
Boeing North American
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6633 Canoga Ave, MS-T487
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Attachment

Winston H. Hickox
Secretary for
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Department of Toxic Substances Control

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Sacramento, California 95812-0806

Gray Davis
Governor

MEMORANDUM

TO: Deborah Oudiz
Senior Toxicologist
Human and Ecological Risk Division (HERD)
Science, Pollution Prevention, and Technology Development

FROM: Yugal K. Luthra, PhD MRSC MIBiol
Staff Toxicologist
Human and Ecological Risk Division (HERD)
Science, Pollution Prevention, and Technology Development

DATE: June 23, 2000

SUBJECT: Boeing Reality Corporation, Parcel D, Boeing C-6 Facility (Site). Post-Demolition Risk Assessment.
PCA Code: 12185, Site Code: 900153-11.

BACFGROUND

HERD, under the provisions of the technical consultation Agreement (Contract # 99-T186) dated September 24, 1999, was directed to provide risk assessment consultative services for Parcel C of the Boeing C-6 Facility (Site).

Parcel D is part of the 170 acre C6 facility. An earlier HERD memorandum concerning Parcel B, also part of the C-6 facility was issued on March 9, 1999. Investigation and excavation at Parcel D (C-6 Facility) was conducted after approval of the sampling and analysis plan (SAP) by the Regional Water Quality Control Board (RWQCB). HERD did not review the SAP.

As stated in the report (Section 1.3.1 - Parcel D Site Investigation and Excavation) the only chemical of potential concern was arsenic, and other "other analysis did not indicate other contaminant concentrations above the health-based remediation goals established for the site". Risk assessment was conducted after excavation of the arsenic impacted soil. Any issues or concerns that may be related to groundwater have not been addressed to evaluate risk.

DOCUMENT(S) REVIEWED

Parcel D Post-Remediation Risk Assessment – Boeing Realty Corporation C-6 Facility, Los Angeles California. The report was prepared by Integrated Environmental Services Inc., Lake Forest, California, and dated February 2000.

SCOPE OF REVIEW

The document was reviewed for scientific and technical contents only. Any grammatical or typographic errors, that did not affect the interpretation of the data and information, were not noted. HERD reviews the site characterization data for their adequacy and suitability for the purpose of risk assessment. Since HERD did not review SAP, no comments can be offered on site investigation to evaluate the extent and magnitude of contamination.

GENERAL COMMENTS

Post-Demolition risk assessment has been well presented. HERD has noted that, for the on-site commercial/industrial scenario, risk estimated is approximately $2x10^{-6}$, mainly due to arsenic. Hazard indices are all below 1.0. There are clarification needed on the background concentrations used for eliminating metals, and exclusion of COPCs. Main issues have been addressed under "Specific Comments".

SPECIFIC COMMENTS

Section 1.4 – Current Conditions

It is stated in this Section that "a sample of the pulverized material had an arsenic concentration of 14 mg/Kg, which did not exceed HBRG levels". This statement is not supported by any adequate reference or risk evaluation, nor is it indicated whether the concentration of arsenic at 14 mg/Kg was for residential or industrial/commercial or construction scenario. HERD would prefer to evaluate such a claim. Surrounding area is a mixture of industrial/commercial and residential land use. If the C-6 property is planned for industrial/commercial land use, a deed restriction must be considered to preclude future land use as residential.

Section 1.6 – Risk Assessment Methodology

No major flaws were apparent in this Section. Risk Assessment procedure is described in a generic manner and references have been provided.

Section 2 – Constituents of Potential Concern

The statement that "not all sample results can be used in a health risk assessment" suggests that some data elements were excluded from the list of chemicals of potential concern (COPCs). This matter needs to be clarified. Furthermore, a screening process may not be acceptable in reducing the number of analytes "to a manageable size". All chemicals detected during sample analyses, must be made part of the COPCs and evaluated for risk/hazard, irrespective of the concentration. However, HERD does permit elimination of contaminants as COPCs, depending upon the frequency of detection, comparison with background concentrations for metals only, and also described in Section 2.3.1 – Screening Methodology. The exception to this approach is the use of USEPA Region IX PRGs to eliminate COPCs. HERD is not aware of any surrogate values that can be used for screening purposes. Justification for excluding COPCs should be provided for review and concurrence of HERD.

The summary data presented in Table 2-1 – Soil COPC Identification Summary, is representative of the contaminants. The background metal concentrations have been compared with on-site values, in accordance with the agreement between HERD and Integrated Environmental Services (1998b, Letter from K. Baker to S.M Stavale, Boeing Realty Corp.). It would be useful to know whether the background concentration of metals, as presented in Table 2-1, are the highest values or 95 % of the upper confidence limit (UCL).

Section 5 – Exposure Point concentrations

The soil COPCs identified at 95 % UCL, in mg/Kg of soil, are arsenic (6.14), beryllium (0.74), chloroform (0.026), phenol (0.105), and tetrachloroethylen (0.014) in Table 5-1.

Models used to estimate dispersion and emission are deferred to the project geologist (DTSC) for review and comments.

Overall no significant inaccuracies were found in this Section.

Section 6 – Risk Characterization

On-Site receptors included a construction worker, commercial industrial worker, and under reasonable maximum exposure (RME) parameters and DTSC/HERD parameters. Off-Site receptors included commercial/industrial worker, and resident adult and child. On-Site exposure pathways accounted for inhalation (volatiles and

particulates), soil ingestion, and dermal contact. For the Off-Site receptors, the only exposure pathway considered was inhalation of volatiles and particulate matter (Table 6-1).

Under Section 6.3 – Risks Posed by Parcel D Post-Demolition Exposure Scenario human health risk under non-residential land use scenario for on-site receptors, using HERD/DTSC default parameters, is approximately $2x10^{-6}$ (Table 6-3) under non-residential land use scenario. Major contributor to risk is arsenic. All other risk estimates for on-site and off-site receptors are below $1x10^{-6}$. Similarly, total hazard index is less than 1.0 for all exposure scenarios (Table 6-3).

Random check of Appendix D – COPC Intake and Risk Calculation Sheets, did not reveal any major flaws,.

CONCLUSION

HERD has identified two areas of concern. These are that the issue of background metal concentrations, for the purpose screening, should be addressed, and justification should be provided for eliminating COPCs. On-site rsik to industrial/commercial receptors was determined to be $1.8x10^{-6}$ (approximately $2x10^{-6}$) under HERD/DTSC default parameters. The point of reference, for risk is $1x10^{-6}$, and for hazard index it is 1.0. The level of acceptable risk is a management decision solely, and should not influence risk assessment process.

Cc: James Carlisle, DVM MS
Senior Toxicologist (HERD)

Confirmation Report–Memory Send

Time : Jul-05-00 09:35am
Tel line 1 : 5626273109
Tel line 2 : 5626273109
Name : BOEING REALTY CORP,

Job number	:	767
Date	:	Jul-05 09:32am
To	:	818185865889
Document Pages	:	07
Start time	:	Jul-05 09:32am
End time	:	Jul-05 09:35am
Pages sent	:	07

Job number : 767 *** SEND SUCCESSFUL ***

Boeing Realty Corporation
4060 Lakewood Blvd., 6th Floor
Long Beach, CA 90808-1700
S. Mario Stavale, Senior Real Estate Manager
Direct (562) 627-3014
Fax (562) 627-3109

Fax

To: Brian Mossman
From: Mario Stavale
Fax: 818-586-5889 **Pages** 7
Phone: 818-586-6015 **Date:** 7/5/00
Re: Harbor Gateway Center, Los Angeles, CA
cc:

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **For Your Files**

Comments:

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Time : Jul-05-00 09:37am
Tel line 1 : 5626273109
Tel line 2 : 5626273109
Name : BOEING REALTY CORP.

Job number	:	768
Date	:	Jul-05 09:34am
To	:	812135766717
Document Pages	:	07
Start time	:	Jul-05 09:35am
End time	:	Jul-05 09:37am
Pages sent	:	07

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Boeing Realty Corporation
4060 Lakewood Blvd., 6th Floor
Long Beach, CA. 90808-1700
S. Mario Stavale, Senior Real Estate Manager
Direct (562) 627-3014
Fax (562) 627-3109

Fax

To: John Geroch
From: Mario Stavale
Fax: 213-576-6717 **Pages** 7
Phone: 213-576-6737 **Date:** 7/5/00
Re Harbor Gateway Center, Los Angeles, CA
cc:

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **For Your Files**

Comments:

If copy received incomplete or illegible
please contact Kim Nichols @ (562) 627-3075

Confirmation Report-Memory Send

Time : Jul-05-00 09:40am
Tel line 1 : 5626273109
Tel line 2 : 5626273109
Name : BOEING REALTY CORP.

Job number	:	769
Date	:	Jul-05 09:36am
To	:	819496093299
Document Pages	:	07
Start time	:	Jul-05 09:37am
End time	:	Jul-05 09:40am
Pages sent	:	07

Job number : 769 *** SEND SUCCESSFUL ***

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4060 Lakewood Blvd , 6th Floor
Long Beach, CA 90808-1700
S. Mario Stavale, Senior Real Estate Manager
Direct (562) 627-3014
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Fax

To: Michael Young
From: Mario Stavale
Fax: 949-609-3299 **Pages** 7
Phone: 949-609-3290 **Date:** 7/5/00
Re: Harbor Gateway Center, Los Angeles, CA
cc:

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **For Your Files**

Comments:

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CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
SCIENCE, POLLUTION PREVENTION, AND TECHNOLOGY PROGRAM

HUMAN AND ECOLOGICAL RISK DIVISION (HERD)

Human and Ecological Risk Sections 1, 2, 3, & 4

(1) Multimedia, (2) DSMOA, (3) So. California and (4) No. California

Industrial Hygiene and Field Safety Section

TELEPHONE (916) 327-2500
FAX (916) 327-2509

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Human and Ecological Risk Division
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Human and Ecological Risk Division
301 Capitol Mall, 3rd Floor
Sacramento, CA 95814

Number of Pages (including cover page): 7

To: Mr. Mario Stevale Date: 27th June 00

Dept./Agency/Org.: Boeing Realty - CC, Pace D

Telephone: _____ FAX: _____

From: Yugal Luthra

Telephone: (916) 327-2512 FAX: _____

COMMENTS: Original to follow.

Department of Toxic Substances Control

Edwin F. Lowry, Director
400 P Street, 4th Floor, P.O. Box 806
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Secretary for
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June 27, 2000

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Monterey Park, California 91754-7500

Michael J. Sullivan, Ph.D.
Safety, Health and Environmental Affairs
Rocketdyne Propulsion and Power
Boeing North American
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6633 Canoga Ave, MS-T487
Canoga Park, CA 91309-7922

Attachment

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Gray Davis
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MEMORANDUM

TO: Deborah Oudiz
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Cc: James Carlisle, DVM MS
Senior Toxicologist (HERD)

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